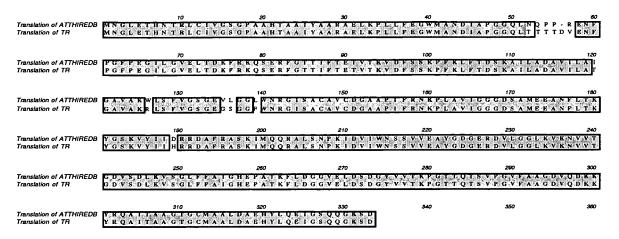


ClustalW Formatted Alignments

	10	•	20	30	40	50	60
TR ATTHIREDB	A T G A A T G G T C A T G A A T G G T C	T C G A A A C T T C G A A A C T	CACAACACAA	GG CT CT GT AT GG CT CT GT AT	C G T A G G A A G T C G T A G G A A G T	G G C C C A G C G G G G C C C A G C G G	C A
	70		<i>80</i>	90	100	110	120
TR ATTHIREDB				CT GAACITAA CT GAACTTAA		TT CGAAGGAT	GG
	100			150		470	
TR ATTHIREDB	A T G G C T A A C G	ACATCGCT	CCCGGTGGTC			GTCGAGAATT GT-GAGAATT	T C
ATTIMEBO	A TO GENTARCO	ACAI CUCI	C-GC GG T G G T C	ARCIJ. · OARC	CANGE AGE OF	OI - DAGARAM	1. ()
TR	CCCGGATTTC	CA,GAAGGT	200 ATTCTCGGAG	210 TAGAGCTCAC	220 T G A C A A A T T C	230 C G T A A A C A A T	240 C G
ATTHIREDB	C C C G G A T T T C	CA GA AGGT	ATTCTCGGASG	TAGAGCTCAC	TGACAAATTC	C G T A A A C A Å T	°C °G
TR	250 G A G C G A T T C G	GT A C T A C G	260 A.T.A.T.T.T.A.C.A.G	270 AGACGGTGAC	280 G A A A G T C G A T	290 TT CT CT T T C G A	300
ATTHIREDB	GAGCGATTCG	GTACTACG	A TATTTACA G	AGACGGTGAC	G A A G T C G A T	TTCTCTTCGA	
110	310	************	320	330	340	350	<i>360</i> 1ст
ATTHIREDB	CCGTTTAAGC	TATTCACA	GATTCAAAAG	CCATTCTCGC CCATTCTCGC	TGACGCTGTG	ATTCTCGCTA	
_	370		380	390	400	410	420
TR ATTHIREDB				TT GG AT CT GG TT GG AT CT GG			6 G
	430		440	450	460	470	480
TR ATTHIREDB						TTCCGTAACA	
TR ATTHIREDB	CCTCTTGCGG	TGATCGGT	GGAGGCGATT GGAGGCGATT	CAGCAATGGA	A G A A G C A A A C	TTTCTTACAA	
						20-33-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-	
TR.	550 TATGGATCTA	AA GT GT AT	560 A T A A T C C A T A	570 G G A G A G A T G C	580 TTTTAGAGCG	590 T C T A A G A T T A T C T A A G A T T A	600 T G
ATTHIREDB	TATGGATCTA	AAGIGIAI	A TAATCG ATA	G G A G A G A I G C	TITELA GAGC G	TECTIA A GRATTEL A	TG
TR	610 C.A.G.C.A.G.C.G.A.G	Carar Great	620 A.A.I.C.C.I.A.A.G.A	630	640 1.1.5 G A A C 1 C G	650 1 C G 1 G G G	660 A A
ATTHIREDB	CAGCAGCGAG	CTTTGTCT	А Т ССТА А G A			TCTGTTGTGG	AA
то	670	Notice Colored Total Colored	680	690	700	710 A A T G T G G T T A	720
ATTHIREDB						AATGTGGTTA	
_	730		740	750	760	770	780
TR ATTHIREDB	G G A G A T G T T T G G A G A T G T T T	CT GA TT TA CT GA TT TA	A A A GT TT CT G A A A GT TT CT G	GATT GT TC TT GATT GT TC TT	T G C T A T T G G T T G C T A T T G G T	CATGAGCCAG CATGAGCCAG	C T
	790		800	810	820	830	840
TR ATTHIREDB	A C C A A G T T T T A C C A A G T T T T	T G G A T G G T T G G A T G G T	G G T G T T G A G T G G T G T T G A G T	TAGATT CGGA TAGATT CGGA	T G G T T A T G T T T G G T T A T G T T	GTCACGAAGC GTCACGAAGC	C T
	MACO		LARCE S	870	нно	ww.	900
TR ATTHIREDB	G G T A C T A C A C	A G A C T A G C	GII CC CG GA G	1111000160	GGGGGATGII	CAGGATAAGA	A G
TR						950 GATGCAGAGC	
ATTHIREDB	TATAGGGCAAG	C.C.A.T.CA.CT	G CATEG CEA GEG ASA	CT G G G T G C A T	G GCAGCTTTG	GANTG CANGANG®C	AST
TR		A.G.A.T.T.G.G.A.	980 T.C.T.C.A.G.C.A.A.G	990 G T A A G A G T G A	1000 T - T - G⊗A	1010	1020
ATTHIREDB			TCTCAGCAAG				

1	ATG	AAT	GGT	CTC	GAA	ACT	CAC	AAC	ACA	AGG	CTC	TGT	ATC	GTA	GGA	AGT	GGC	CCA	GCG	GCA	60
1	M	N	G	L	E	Т	Н	N	Т	R	L	С	I	V	G	S	G	P	A	A	20
61	CAC	ACG	GCG	GCG	ATT	TAC	GCA	GCT	AGG	GCT	GAA	CTT	AAA	CCT	CTT	CTC	TTC	GAA	GGA	TGG	120
21	Н	Т	A	A	I	Y	Α	A	R	Α	E	L	K	P	L	L	F	Ė	G	W	40
121	ATG	GCT	AAC	GAC	ATC	GCT	CCC	GGT	GGT	CAA	CTA	ACA	ACC	ACC	ACC	GAC	GTC	GAG	AAT	TTC	180
41	M	A	N	D	I	A	P	G	G	Q	L	Т	T	Т	Т	D	V	E	N	F	60
	CCC																				240
61		G	F	P	E	G	I	L	G	V	E	L	Т	D	K	F	R	K	Q	S	80
	GAG																				300
81	Ŀ	R	F	G	Т	Т	I	F	Т	E	Т	V	T	K	V	D	F	S	S	K	100
301	CCG	TTT	AAG	CTA	TTC	ACA	GAT	TCA	AAA	GCC	АТТ	CTC	GCT	GAC	GCT	GTG	АТТ	CTC	GCT	ACT	360
101	P	F	K	L	F	T	D	s	K	A	I	L	A	D	A	v	I	L	A	T	120
																				•	
	GGA																				420
121	G	A	V	Α	K	R	L	s _.	F	V	G	S	G	E	G	S	G	G	F	W	140
421	AAC	CGT	GGA	ATC	TCC	GCT	TGT	GCT	GTT	TGC	GAC	GGA	GCT	GCT	CCG	ATA	TTC	CGT	AAC	AAA	480
141	_		G	I	s	A	C	A	v	С	D	G	A	A	P	I	F	R	N	K	160
	CCT																				540
161	P	L	A	V	I	G	G	G	D	S	A	M	E	E	Α	N	F	L	Т	K	180
541	ТАТ	GGA	тст	AAA	GTG	т. ТАТ	АТА	ATC	САТ	AGG	AGA	GAT	GCT	ጥጥጥ	AGA	GCG	ጥርጥ	AAG	АТТ	ATG	600
181		G	s		v	Y	I	I	Н	R	R	D	A	F	R	A	s	K	I	М	200
601	CAG	CAG	CGA	GCT	TTG	TCT	AAT	CCT	AAG	ATT	GAT	GTG	ATT	TGG	AAC	TCG	TCT	GTT	GTG	GAA	660
201	Q	Q	R	A	L	s	N	P	K	I	D	V	I	W	N	S	s	V	V	E	220
661	GCT	ጥልጥ	GGA	СУТ	GGA	GAA	ΔGΔ	GAT	GTG	ርጥጥ	GGA	GGA	ጥጥር	מממ	GTG	ΔAG	ልልጥ	GTG	GTT	ACC	720
221		Y	G	D	G	E	R	D	V	L	G	G	L	K	V	K	N	V	V	Т	240
												_									
721	GGA	GAT	GTT	TCT	GAT	TTA	AAA	GTT	TCT	GGA	TTG	TTC	TTT	GCT	TTA	GGT	CAT	GAG	CCA	GCT	780
241	G	D	V	S	D	L	K	V	s	G	L	F	F	A	I	G	Н	E	P	A	260
701			mmm		@1 m	aam	~~m		~1~		a.m		~	~~~		~~~	ama			aam	040
	ACC T			TTG L			GGT				GAT D	TCG			TAT Y		GTC V	ACG T	AAG K	P	840 280
201	1	K	F	ט	ט	G	G	V	E	L	ט	5	ט	G	1	V	V	1	K	r	200
841	GGT	ACT	ACA	CAG	ACT	AGC	GTT	CCC	GGA	GTT	TTC	GCT	GCG	GGT	GAT	GTT	CAG	GAT	AAG	AAG	900
281	G	т	т	Q	т	s	v	P	G	v	F	A	A	G	D	v	Q	D	K	ĸ	300
	TAT																				960
301	Y	R	Q	Α	I	Т	A	A	G	Т	G	С	M	Α	Α	L	Đ	A	E	Н	320
961	TAC	тта	CAA	GAG	ATT	GGA	тст	CAG	CAA	GGT .	AAG .	AGT (GAT '	ГGA							1002
	Y																				334

ClustalW Formatted Alignments



PstI

1	<u>ct</u>	gcag	gaat	tcat	tgta	ctccc	agta	tcat	tata	agtg	aaag	tttt	geto	tete	gccg	gtgg	tttt	ttac	ctct	attta	80
81	aaç	3999 ¹	tttt	ccac	ctaas	aaatt	ctgg	tato	atto	ctca	cttt	actto	gttac	ttta	attt	ctca	taat	cttt	ggtt	gaaat	160
161	tat	cac	gctt	ccgca	cacç	gatat	ccct	acaa	atti	atta	attt	gttas	acat	tttc	aaac	cgca	taaa	attt	tatg	aagtc	240
241	ccg	gtota	atcti	taat	gtag	gtcta	acat	tttc	atat	tga	aatai	tataa	ttte	ctta	attt	tago	gttg	gtag	aaag	cataa	320
321	tga	ttta	attci	tatt	ctto	ettca	tata	aatg	ttta	aatai	taca	atata	aaca	aatt	cttt	acct	taag	aagg	attt	cccat	400
401	ttt	atat	ttt	aaaa	atata	attta	tcaa	atat	ttti	caa	cac	gtaas	tete	ataa	taat	aagt	tgtt	tcaa	aagt	aataa	480
481	aat	tta	actco	catas	tttt	ttta	ttcg	actg	atct	taa	agca	acaco	cagt	gaca	caac	tagc	catt	tttt	tett	tgaat	560
561	aaa	ıaaa	atcca	aatta	atcat	tgta	tttt	tttt	atad	caat	gaaa	attto	acca	aaca	atca	tttg	tggt	attt	ctga	agcaa	640
641	gto	atgt	tate	gcaaa	atto	tata	atto	ccat	ttga	acact	tacgg	gaagt	aact	gaag	atct	gctt	ttac	atgc	gaga	cacat	720
721	ctt	cta	agta	aattt	taat	aata	gtta	ctat	atto	caage	attt	catat	atca	aata	ctca	atat	tact	tcta	aaaa	attaa	800
801	tta	ıgata	ataat	taaa	atat	tact	tttt	taat	ttta	agti	taat	tgtt	gaat	ttgt	gact	attg	attt	atta	ttct	actat	880
881	gtt	taas	attgi	ttta	taga	tagt	ttaa	agta	aata	ataag	gtaat	gtag	taga	gtgt	taga	gtgt	tacc	ctaa	acca	taaac	960
961	tat	aaga	attta	atggt	ggac	taat	tttc	atat	atti	ctt	attgo	ettt	acct	tttc	ttgg	tatg	taag	teeg	taac	tggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	cact	ctgt	ggtc	ttt	ggtt	cato	cato	gatg	cttg	cgca	agaa	aaag	acaa	agaa	caaag	1120
1121	aaa	aaag	Jacas	aaca	gaga	gaca	aaac	gcaa	tcac	acas	accaa	ctca	aatt	agtc	actg	gctg	atca	agat	cgcc	gcgtc	1200
1201	cat	gtat	gtct	aaat	gcca	tgca	aagc	aaca	cgtg	gctta	acat	gcac	ttta	aatg	gctc	accc	atct	Caac	ccac	acaca	1280
1281	aac	acat	tgcc	tttt	tctt	catc	atca	ccac	aacc	acct	gtat	atat	tcat	tctc	ttcc	gcca	cctc	aatti	tett	cactt	1360
1361	caa	Caca	cgto	aacc	tgca	tatg	cgtg	tcat	CCCE	tgc	caas	tete	catg	catg	ttcc	aacc	acct	tete	tett	atata	1440
1441	ata	ccta	taas	tacc	tcta	atat	cact	cact	tctt	tcat	cato	cato	cato	caga	gtac	tact	actc	tact	acta	taata	1520
1521	ccc	caac	ccaa	ctcat	atto	aata	ctac	tcta													1587
1										M	A					-				C	11
1588 12		ACC T	GTT V	gag E	ACA T	TGG W		gag E				K K		AAT N	gaa E	TCC S	AAA K	ACT T	CTT L	gtg V	1647 31
1648	GTG	GTT	GAT	TTC	ACG	GCT	TCT	TGG	TGT	GGA	CCA	TGT	CGT	TTC	ATC	GCT	CCA	TTC	TTT	GCT	1707
32	v	v	D	F	T	A	s	W	С	G	P	С	R	F	I	A	P	F	F	A	51
1708						CTT														AAG K	1767

FIGURE 6 (CONT'D)

.768	TCG	GTG	GCA	AGT	GAT	TGG	GCG	ATA	CAG	GCG	ATG	CCA	ACC	TTC	ATG	TTT	TTG	AAG	GAA	GGG	1827
72	s	v	A	s	D	W	A	I	Q	A	M	P	T	F	M	F	L	ĸ	E	G	91
												GAT									1887
92	K	I	L	D	K	V	v	G	A	K	K	D	E	L	Q	s	T	I	A	K	111
					diii 4. 44	1063
					A gc	caat	aagt	atga	acta	aaat	gcat	gtag	gtgt	aaga	gete	acgg	agag	cacg	jaaca	attgt	
112	н	L	A	*			,														115
1964	ato	cgac	catg	rtaac	agta	taat	aact	gagc	tcca	tctc	actt	cttc	tatga	aata	aacaa	agga	atgti	atga	tata	ttaa	2043
2044	cac	tcta	tcta	tgca	cctt	attg	ttct	atga	taaa	tttc	ctct	tatt	atta	taaa	tcate	ctgaa	atcgt	gacg	gctt	atgg	2123
2124	aat	gctt	caaa	tagt	acaa	aaac	aaat	gtgt	acta	taag	actt	tcta	aaca	attc	taact	ttag	gcati	gtga	acga	gaca	2203
2204	+==	at at	+==		cete	2022	++++	22ta	~==~	99 7 +	t t at	ctcc	a+++;	a+ a+:	a++a1	-2+21	tace	rca ct	tato	tatt	2283
2204	caa	gege	····	aaga	caca	acaa	CCAC	aacy	gaag.	aag c	cege					Jucu.			July	,0400	
2284	ata	ttag	gatg	rttaa	ggag	acat	aaca	atta	taaa	gaga	gaag	tttgi	tatc	catt	tatat	atta	atata	actac	ccat	ttat	2363
2364	ata	ttat	actt	atco	actt	attt	aatg	tctt	tata	aggt	ttga	tccat	tgat	attt	ctaat	atti	tagt	tgat	atgt	atat	2443
																					0500
2444	gaa	aggg	tact	attt	gaac	tctc	ttac	tctg	tata	aagg	ttgg	atca	tcct	taaa	gtggg	gteta	attta	attt	tatt	gctt	2523
2524	ctt	acad	ataa		8888	ttat	gagt.	t aat	ttga	taaa	atati	tosso	ggati	ttaa	aatas	ataai	aaat	aata	aata	acat	2603
	-						5-5-	-55-	,-			-5,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
2604	ata	atat	atgt	atat	aaat	ttat	tata	atat	aaca	ttta	tcta	taaa	aaagt	taaa	tatto	gtcat	taaat	ctat	acae	tcgt	2683
2684	tta	gcct	tgct	ggac	gact	ctca	atta	ttta	aacg	agag	taaa	cata	tttg	actt	tttgg	gttai	ttaa	caaa	ttat	tatt	2763
2764	taa	cact	atat	gaaa	tttt	tttt	tttt	atcg	gcaa	ggaa	ataa	aatt	aaati	tagg	aggga	acaat	tggtg	gtgto	ccae	tcct	2843
2844	+=+	2022		cttc		~~==	aat c	aaat	caaa	72 72				7000	7772	++1	-+++:		aaat	tgtc	2923
2044	Lac	acaa	ccaa		.caca	AAaa	9900	- AAC	-222	gaca	acaa		acay;	Jour	99944	1446				.cgcc	4505
2924	ttg	tttg	ctgc	ataa	ttta	tgca	gtaa	aaca	ctac	acat	aacc	cttt	tagc	agta	gagca	aatg	gttga	accgt	gtgc	ttag	3003
3004	ctt	cttt	tatt	ttat	tttt	ttat	cagc	aaag	aata	aata	aaat	aaaa	tgag	acac	ttcag	ggat	gtti	caac	cctt	atac	3083
084				2222	a+++	aat c	~~~			+	~+ n -	_									3129
U04	aaaa	ducc	aaaa	acaa	gutt	CCER	acacc	ccac	caac	caag	Arac	<u>u</u>									J149

Pstl

1	ct	<u>rcag</u>	gaatt	catt	gtac	tece	agta	tcat	tata	gtga	aagt	tttg	gctc	tctc	gccg	gtgg	tttt	ttac	ctct	attta	80
8:	L aa	gggg	tttt	ccac	ctaas	aatt	ctgg	tato	atto	tcac	ettt	actt	gttac	ttta	attt	ctca	taat	cttt	ggtt	gaaat	160
161	. tai	tcac	gette	cgca	cacg	gatat	ccct	acaa	attt	atta	atttg	gttaa	acat	tttc	aaac	cgca	taaa	attt	tatg	aagtc	240
241	. cc	gtota	atcti	taat	gtag	jtcta	acat	tttc	atat	tgaa	atat	ataa	attta	ctta	attt	tago	gttg	gtag	aaag	cataa	320
321	. tga	attta	attci	tatt	cttc	ttca	tata	aatg	ttta	atat	acas	atata	aaca	aatt	cttt	acct	taag	aagg	attt	cccat	400
401	. tti	tatai	ttt	1888	tata	ttta	tcaa	atat	tttt	caac	cacç	gtaaa	atcto	ataa	taat	aagt	tgtt	tcaa	aagt	aataa	480
481	. aat	tta	actco	cataa	tttt	ttta	ttcg	actg	atct	taaa	agcaa	caco	ccagt	gaca	caac	tagc	catt	tttt	tctt	tgaat	560
561	. aaa	2888	atcca	aatta	tcat	tgta	tttt	tttt	atac	aatg	yaaas	attt	cacca	aaca	atca	tttg	tggt	attt	ctga	agcaa	640
641	. gt	catgi	tatç	gcaaa	atto	tata	atto	ccat	ttga	cact	acgg	gaagt	aact	gaag	atct	gctt	ttac	atgc	gaga	cacat	720
721	. cti	tctaa	aagta	aattt	taat	aata	gtta	ctat	atto	aaga	attt	catat	atca	aata	ctca	atat	tact	tcta	aaaa	attaa	800
801	. tta	agata	ataat	taaa	atat	tact	tttt	taat	ttta	agtt	taat	tgtt	gaat	ttgt	gact	attg	attt	atta	ttct	actat	880
881	. gt1	taaa	attgt	ttte	taga	tagt	ttaa	agta	aata	taaç	gtaat	gtag	gtaga	gtgt	taga	gtgt	tacc	ctaa	acca	taaac	960
961	. tai	taaga	attta	atggt	ggac	taat	tttc	atat	attt	ctta	attgo	tttt	acct	tttc	ttgg	tatg	taag	teeg	taac	tggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	cact	ctgt	ggtc	tttt	ggtt	cate	cato	gatg	cttg	cgca	agaa	aaag	acaa	agaa	caaag	1120
1121	aaa	aaag	gacas	aaca	gaga	gaca	aaac	gcaa	tcac	acas	ccas	ctca	aatt	agtc	actg	gctg	atca	agat	cgcc	gcgtc	1200
1201	cat	gtat	gtct	aaat	gcca	tgca	aagc	aaca	cgtg	ctta	acat	gcac	ttta	aatg	gctc	accc	atct	caac	ccac	acaca	1280
1281	aac	cacat	tgcc	tttt	tctt	catc	atca	ccac	aacc	acct	gtat	atat	tcat	tete	ttcc	gcca	cctc	aatti	tctt	cactt	1360
1361	Cas	caca	cgto	aacc	tgca	tatg	cgtg	tcat	ccca	tgcc	caas	tcto	catg	catg	ttcc	Bacc	acct	tete	tctt	atata	1440
1441	ata	ccta	itaas	tacc	tcta	atat	cact	cact	tctt	tcat	cato	cato	cato	caga	gtac	tact	actc	tact	acta	taata	1520
1521	ccc	caac	ccaa	ctcat	atto	aata	ctac	tcta	ct A	TG (GCG (GAT :	ACA (GCT 2	AGA G	GA A	ACC (CAT (CAC	GAT	1587
1									;	М	A	D	T	A	R (G '	T :	H :	н	D	11
1588 12				AGA R			TAC Y		ATG M		GGC G			CGA R						TCC	1647 31
						-										-					
1648 32			GGA G				TCC S		TCT S	AGG R			GCT A			GCA A		GCT A	GTC V	ACA T	1707 51
1708 52														GTT V							1767 71

FIGURE 7 (CONT'D)

1768 72	ACT T	GTT V	GCA A	ACA T	P	CTG L	CTC L	GTT V	ATC I	TTC F	AGC S	CCA P	ATC I	CTT L	GTC V	CCG P	GCT A	CTC L	ATC I	ACA T	1827 91
1828 92		GCA A	CTC L	CTC L	ATC I	ACC T	ggt g	TTT F	CTT L	TCC S	TCT S	GGA G	GGG G	TTT F	GGC G	ATT I	GCC A	GCT A	ATA I	ACC T	1887 111
1888 <i>112</i>		TTC F	TCT S	tgg W	ATT I	TAC Y	AA g	gtaag	gcaca	catt	tato	catct	tact	tcat	aatt	ttgt	gcas	tatg	tgca	tgca	1960 118
1961	. tgt	gttg	gagco	agta	ıgctt	tgga	tcaa	ttt	tttg	gtcg	aata	acaa	at <i>g</i> t.	aaca	ataag	gaaai	ttgca	aatt	ctag	ggaa	2040
2041	. cat	ttgg	yttaa	ctaa	atac	gaaa	tttg	acct	agct	agct	tgaa	tgtg	tctg	tgta	tatca	atct	atata	iggta	aaat	gctt	2120
<i>2121</i> 119	ggt	atga	tacc	tatt	gatt	gtga	atag	G T		CA AC	G GG	GA GA	AG CA	AC CC	CA CZ Q	G G G G	SA TO	A GA	AC AA	r <u>G</u>	2184 130
2185	TTG	GAC	AGT	GCA	AGG	ATG	AAG	TTG	GGA	AGC	AAA	GCT	CAG	GAT	CTG	AAA	GAC	AGA	GCT	CAG	2244
131	L	D	S	A	R	M	K	L	G	S	K	A	Q	D	L	K	D	R	A	Q	150
2245	TAC	TAC	GGA	CAG	CAA	CAT	ACT	GGT	GGG	GAA	CAT	GAC	CGT	GAC	CGT	ACT	CGT	GGT	GGC	CAG	2304
151	Y	Y	G	Q	Q	H	T	G	G	E	Н	D	R	D	R	T	R	G	G	Q	170
2305	CAC	ACT		OI ATG	GCT	TCG	GAA	GAA	GGA	CAA	GTG	ATC	GCC	TGC	CAC	ACC	GTT	GAG	ACA	TGG	2364
171		T	T	м	A	s	E	E	G	Q	v	I	A	C	н	T	v	E	T	W	190
2365		GAG		CTT	CAG	AAG	GCT	AAT	GAA	TCC					GTG		GAT		ACG		2424
191	N	E	Q	L	Q	K	A	N	E	s	K	T	L	v	v	v	D	F	T	A	210
2425	тст	TGG	TGT	GGA	CCA	TGT	CGT	TTC	ATC	GCT	CCA	TTC	ттт	GCT	GAT	TTG	GCT	AAG	AAA	CTT	2484
211		W	C	G	P	C	R	F	r	A	P	F	F	A	D	L	A	ĸ	ĸ	L	230
2485	-	_		_			AAG				GAT				TCG				GAT		2544
231	P	N	v	L	F	L	K	V	D	T	D	E	L	K	s	v	A	S	D	W	250
2545	GCG	ATA	CAG	GCG	ATG	CCA	ACC	TTC	ATG	TTT	TTG	AAG	GAA	GGG	AAG	ATT	TTG	GAC	AAA	GTT	2604
251	A	I	Q	A	M	P	T	F	M	f	L	ĸ	E	G	ĸ	I	L	D	ĸ	v	270
2605	C TETT	CCN	ccc	AAG		C 3 M	C3.C	СТТ	CAG	TCT	ACC	a mm	000	AAA	CNC	TTG	CCM	ma a		taata	2666
271		G	A	K	K	D	E	L	Q	s	T	I	A	K	H	L	A.	1 <u>AA</u>	geri	Laata	288
2,1	•	•	-			_	_	~	¥		•	•	•	•	••	-	•				200
2667	agt	atga	acta	aaat	gcat	gtag	gtgt	aaga	gctc	atgg	agag	catg	gaat	attg	tatco	gaco	catgt	aaca	gtat	aata	2746
2747	act	gago	tcca	tctc	actt	cttc	tatg	aata	aaca	aagg	atgt	tatg	atat	atta	acact	ctat	ctat	gcac	ctte	ttgt	2826
2827	tct	atga	taaa	tttc	ctct	tatt	atta	taaa	tcat	ctga	atcg	tgac	ggct	tatg	gaatg	gette	caaat	agta	caas	aaca	2906
2907	aat	gtgt	acta	taag	actt	tcta	aaca	attc	taac	ttta	gcat	tgtg	aacg	agac	ataag	gtgtt	taaga	agac	atas	caat	2986
2007																					2056

FIGURE 7 (CONT'D)

3067	acaattataaagagagaagtttgtatccatttatatattatatactacccatttatatattat	3146
3147	${\tt atgtctttataaggtttgatccatgatatttctaatattttagttgatatgtatatgaaagggtactatttgaactctct}$	3226
3227	tactctgtataaaggttggatcatccttaaagtgggtctatttaattttattgcttcttacagataaaaaaaa	3306
3307	agttggtttgataaaatattgaaggatttaaaataataat	3386
3387	ataatataacatttatctataaaaaagtaaatattgtcataaatctatacaatcgtttagccttgctggacgactctcaa	3466
3467	ttatttaaacgagagtaaacatatttgactttttggttatttaacaaattattatttaacactatatgaaatttttttt	3546
3547	tttatcggcaaggaaataaaattaaattaggagggacaatggtgtgtcccaatccttatacaaccaac	3626
3627	gtcaggtcggggacaacaaaaaaacaggcaagggaaattttttaatttgggttgtcttgtttgctgcataatttatgcag	3706
3707	taaaacactacacataacccttttagcagtagagcaatggttgaccgtgtgcttagcttcttttatttttttt	3786
3787	agcaaagaataaataaaataaaatgagacacttcagggatgtttcaacccttatacaaaaccccaaaaacaagtttccta	3866
867 9	gcaccctaccaactaaggtacc	3888

Kpnl

	Pst	ΞI																			
1	ctac	<u>ag</u> ga	aatto	catto	gtact	ccca	ngtat	catt	atag	gtga	aagti	tttgg	getet	ctc	gccgc	gtggt	tttt	taco	ctcta	attta	80
81	. aag	gggg	tttt	ccaco	ctaaa	aaatt	ctgg	rtato	atto	tcad	ettta	cttg	ttac	ttta	attt	ctca	taat	cttt	ggtt	gaaat	160
161	. tat	cace	gctto	ccgca	caco	jatat	ccct	acaa	attt	atta	tttg	rttaa	acat	tttc	aaac	cgca	taaa	attt	tatga	aagtc	240
241	. ccg	gtcta	atctt	taat	gtag	gtcta	acat	tttc	atat	tgaa	atat	ataa	ttta	ctta	attt	tagc	gttg	gtag	aaag	cataa	320
321	. tga	attta	attct	tatt	ctto	ettea	tata	aatg	ttta	atat	acaa	tata	aaca	aatt	cttt	acct	taag	aagg	attt	cccat	400
401	. ttt	atat	tttta	aaaa	atata	attta	tcaa	atat	tttt	caac	cacg	rtaaa	tctc	ataa	taat	aagt	tgtt	tcaa	aagta	aataa	480
481	. aat	ttaa	actco	cataa	tttt	ttta	ttcg	actg	atct	taaa	ıgcaa	cacc	cagt	gaca	caac	tagc	catt	tttt	tctt	tgaat	560
561	. aáa	aaaa	atcca	aatta	tcat	tgta	tttt	ttt	atac	aatg	jaaaa	itttc	acca	aaca	atca	tttg	tggt	attt	ctga	agcaa	640
641	gto	catgt	ttato	gcaaa	atto	tata	atto	ccat	ttga	cact	acgg	raagt	aact	gaag	atct	gctt	ttac	atgc	gaga	cacat	720
721	. ctt	ctaa	aagta	aattt	taat	aata	ıgtta	ctat	atto	aaga	tttc	atat	atca	aata	ctca	atat	tact	tcta	aaaa	attaa	800
801	. tta	agata	ataat	taaa	atat	tact	ttt	taat	ttta	agtt	taat	tgtt	gaat	ttgt	gact	attg	attt	atta	ttcta	actat	880
881	. gtt	taaa	attgt	ttta	taga	atagt	ttaa	agta	aata	itaag	taat	gtag	taga	gtgt	taga	gtgt	tacc	ctaa	acca	taaac	960
961	. tat	caaga	attta	atggt	ggac	taat	tttc	atat	attt	ctta	attgo	tttt	acct	tttc	ttgg	tatg	taag	tccg	taac	tggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	rcact	ctgt	ggtc	tttt	ggtt	catg	catg	gatg	cttg	cgca	agaa	aaag	acaa	agaa	caaag	1120
1121	aaa	aaaç	jacaa	aaca	gaga	ıgaca	.aaac	gcaa	tcac	acaa	ccaa	ctca	aatt	agtc.	actg	gctga	atca	agat	cgcc	gegte	1200
1201	cat	gtat	gtct	aaat	.gcca	ıtgca	.aagc	aaca	cgtg	ctta	acat	gcac	ttta	aatg	gctc	accca	atct	caac	ccaca	acaca	1280
1281	aac	acat	tgcc	tttt	tctt	cato	atca	ccac	aacc	acct	gtat	atat	tcat	tctc	ttcc	gcca	cctc	aatt	tctt	cactt	1360
1361	caa	caca	acgto	aacc	tgca	ıtatg	cgtg	tcat	ccca	tgcc	caaa	tctc	catg	catg	ttcc	aacca	acct	tctc	tctt	atata	1440
1441	ata	ccta	itaaa	tacc	tcta	atat	cact	cact	tctt	tcat	cato	catc	catc	caga	gtac	tacta	actc	tact	acta	taata	152
1521	ccc	caac	ccaa	ctcat	atto	caata	ctac	tcta	ct A	TG (CT 7	rcg o	SAA G	SAA G	GA C	CAA G	etg 2	ATC (gaa r	rgc	1587
1										M	A	s	E :	E (G (Q '	V	I	A	С	11
1588 12			GTT V		ACA T		AAC N					AAG K		AAT N	GAA E	TCC S	AAA K	ACT T	CTT L		1647 31
1648	GTG	GTT	GAT	ттс	ACG.	GCT	тст	TGG	TGT	GGA	CCA	TGT	CGT	TTC	ATC	GCT	CCA	ттс	ттт	GCT	1707
						A											P		F	A	51
1708																				AAG K	176

FIGURE 8 (CONT'D)

1768 72		GTG V	GCA A	AGT S	GAT D	TGG W	GCG A	ATA I	CAG O	GCG A	ATG M	CCA P	ACC T	TTC F	ATG M	TTT F	TTG L	AAG K	GAA E	GGG G	1827 91
12	5	V	А	5	ע	W	А	1	Q	А	М	P	T	r	M	F	ь	K	Ŀ	G	91
1828									GCC							TCT		ATT	GCC		1887
92	K	I	L	D	K	V	V	G	Α	K	K	D	E	L	Q	s	Т	I	A	K	111
1888		TTG	GCT	ATG	GCG																1947
112	Н	L	A	M	A	D	т	Α	R	G	т	Н	Н	D	Ι	I	G	R	D	Q	131
1948	TAC	CCG	ATG	ATG	GGC	CGA	GAC	CGA	GAC	CAG	TAC	CAG	ATG	TCC	GGA	CGA	GGA	TCT	GAC	TAC	2007
132	Y	P	М	M	G	R	D	R	D	Q	Y	Q	M	s	G	R	G	S	D	Y	151
2008	TCC	AAG	тст	AGG	CAG	АТТ	GCT	AAA	GCT	GCA	АСТ	GCT	GTC	ACA	GCT	GGT	GGT	TCC	CTC	CTT	2067
152	S	K	S	R	Q	Ι	A	K	Α	A	Т	A	V	Т	A	G	G	S	L	L	171
2068	GTT	СТС	TCC	AGC	CTT	ACC	CTT	GTT	GGA	ACT	GTC	АТА	GCT	TTG	ACT	GTT	GCA	ACA	CCT	CTG	2127
172	v	L	s	s	L	Т	L	V	G	T	V	1	A	L	T	V	Α	T	P	L	191
2128	CTC	GTT	ATC	TTC	AGC	CCA	ATC	СТТ	GTC	CCG	GCT	CTC	ATC	ACA	GTT	GCA	CTC	CTC	ATC	ACC	2187
192	L	v	I	F	S	P	I	L	v	P	A	L	I	Т	V	A	L	L	I	T	211
2188	GGT	ттт	CTT	TCC	тст	GGA	GGG	TTT	GGC	ATT	GCC	GCT	ATA	ACC	GTT	TTC	тст	TGG	ATT	TAC	2247
212	G	F	L	S	s	G	G	F	G	I	A	Α	I	т	V	F	s	W	I	Y	231
2248	AA c	gtaag	gcaca	acatt	tato	atct	tact	tcat	aatt	ttgt	gcaa	tatg	rtgca	tgca	tgtg	ttga	ıgcca	gtag	cttt	ggat	2326
232		_								_	_	_	_	•		_	•				232
2327	caa	tttt	tttg	gtcg	raata	acaa	atgt	aaça	ataa	gaaa	ttgc	aaat	tctag	ggga	acati	tgg	ttaad	ctaaa	ataco	gaaat	2406
																				gaaat	
																				gaaat gtgaa	
	' ttg	gacct	agct	agct	tgaa	tgtg	tctg	tgta	tatc	atct	atat	aggt	aaaa	tgct	tggta	atgai	tacci	tattg		gtgaa	2486 2544
2407	' ttg	gacct	agct	agct	tgaa	tgtg	tctg	tgta	tatc	atct	atat	aggt	aaaa	tgct	tggta	atgai	tacci	tattg	gattg	gtgaa	2486
2407 2487	ttg	gacct G T# Y	agct AC GO A	agct CA AC T	tgaa CG GC G	tgtg GA GA E	tctg AG CÆ H	tgta AC CC P	tatc CA CA Q	atct AG GO G	atata SA TO	aggt CA GA D	aaaa AC AF K	t <i>gc</i> t: \G T1 L	tggta TG G# D	atgai AC AC S	tacci GT GC A	tatto CA AG R	gatto GG AT M	gtgaa PG	2486 2544
2407 2487 233	tag AAG	gacct G T# Y	agct AC GO A	agct CA AC T	tgaa CG GC G	tgtg GA G <i>F</i> E	tctg AG CÆ H	tgta AC CC P	tatc CA CA Q	atct AG GO G	atata SA TO	aggt CA GA D	aaaa AC AF K	t <i>gc</i> t: \G T1 L	tggta TG G# D	atgai AC AC S	tacci GT GC A	CAG Q	gatto GG AT M CAA Q	gtgaa TG CAT H	2486 2544 250
2407 2487 233 2545	tag tag AAG K	gacct G TA Y TTG L	aget AC GC A GGA G	CA AC T AGC S	tgaa CG GC G AAA K	tgtg SA GA E GCT A	tctg AG CA H CAG Q	tgta AC CC P GAT D	tatc CA CA Q CTG L	atct AG GO G AAA K	atata GA TO S GAC D	aggto CA GA D AGA R	aaaa AC AA K GCT A	tgct: AG TT L CAG	tggta TG GA D TAC	atgai AC AG S TAC Y	tacct GT GC A GGA G	CAG Q	gattg GG AT M CAA Q indI:	gtgaa TG CAT H	2486 2544 250 2604 270
2407 2487 233 2545 251	tag AAG K	gacct G TA Y TTG L	aget AC GC A GGA G	CA AC T AGC S	tgaa CG GC G AAA K	tgtg SA GA E GCT A	tctg AG CA H CAG Q	tgta AC CC P GAT D	tatc CA CA Q CTG L	atct AG GO G AAA K	atata GA TO S GAC D	aggto CA GA D AGA R	aaaa AC AA K GCT A	tgct: AG TT L CAG	tggta TG GA D TAC	atgai AC AG S TAC Y	tacct GT GC A GGA G	CAG Q	gattg GG AT M CAA Q indI:	gtgaa CG CAT H	2486 2544 250 2604 270
2407 2487 233 2545 251 2605 271	tag AAG K ACT	G THE Y TTG L GGT	AC GG A GGA G GGG G	AGC S GAA	Etgaa G G AAA K CAT H	tgtg GAC D	CAG Q CGT R	GAT GAC D	tatc Q CTG L CGT	atct AG GO G AAA K ACT	GAC D CGT	aggta D AGA R GGT	aaaa K GCT A GGC	L CAG Q CAG Q	TAC Y CAC	atgai S TAC Y ACT	GGA GGA GA G	CAG Q H:	gatto GG AT M CAA Q indI: gctt	gtgaa CG CAT H	2486 2544 250 2604 270 2666 288
2407 2487 233 2545 251 2605 271 2667	tag AAG K ACT T	G TAY TTG L GGT G	GGA GGG GGG	AGC S GAA E	Etgaa G G AAA K CAT H	tgtg SA GA E GCT A GAC D	CAG CAG CGT R	GAT GAC D GAC D	tate Q CTG L CGT R	ACT T	GAC D CGT R	aggt. CA GA D AGA R GGT G	GGC GGC Ggaata	L CAG Q CAG Q	TAC Y CAC H	AC AC Y ACT T	GGA GA ACT T	CAG Q H: TAA	gatte M CAA Q indI: gctt	gtgaa CG CAT H H II <u>S</u> aata	2486 2544 250 2604 270 2666 288
2407 2487 233 2545 251 2605 271 2667	tag AAG K ACT T	G TAY TTG L GGT G	GGA GGG GGG	AGC S GAA E	Etgaa G G AAA K CAT H	tgtg SA GA E GCT A GAC D	CAG CAG CGT R	GAT GAC D GAC D	tate Q CTG L CGT R	ACT T	GAC D CGT R	aggt. CA GA D AGA R GGT G	GGC GGC Ggaata	L CAG Q CAG Q	TAC Y CAC H	AC AC Y ACT T	GGA GA ACT T	CAG Q H: TAA	gatte GG AT M CAA Q indI: gctt	gtgaa TG CAT H II <u>2</u> aata	2486 2544 250 2604 270 2666 288
2407 2487 233 2545 251 2605 271 2667 2747	ttg tag AAG K ACT T agt	G TA Y TTG L GGT G	AC GGA A GGG G G G G G G G G G G G G G G	T AGC S GAA E	CG GG G AAA K CAT H gcat	tgtg E E GCT A GAC D gtag	AG CAG H CAG Q CGT R gtgt	tgta AC CCC P GAT D GAC D aaga	tate Q CTG L CGT R gete	atct G G AAA K ACT T aatgg	S GAC D CGT R	AGA R GGT G GCT G GCT G GCT G GCT G G G G G G	AC AA K K GCT A GGC G	CAG Q CAG Q	TAC Y CAC H	ACT T	GGA ACT T	CAG Q H. TAA *	gattg M CAA Q Q iindI: gctt	gtgaa CG CAT H H II <u>S</u> aata	2486 2544 250 2604 270 2666 288 2746
2407 2487 233 2545 251 2605 271 2667 2747 2827	ttg tag AAG K ACT T agt act	G TAY TTG L GGT G atga	AC GGA A G GGG G G G G G G G G G G G G G	T AGC S GAA E	CG GG GG AAA K CAT H gcat	tgtg GA GA GAC D gtag cttc	AG CAG H CAG Q CGT R gtgt tatg	AC CCC P GAT D GAC D aaga	CTG L CGT R gctc.	atct AG GG G AAA K ACT T aatgg	SA TC S GAC D CGT R aagagg	aggt. CA GA D AGA R GGT G tatga	aaaaa K K GCT A GGC G	L CAG Q CAG Q CAG L CAG Q	TAC Y CAC H tatco	atgal C AC S TAC Y ACT T	TT GC A GGA ACT T catgt	CAG R CAG Q H: TAA *	GG AT M CAA Q Q indicate good good good good to go to	gtgaa CG CAT H II Zaata	2486 2544 250 2604 270 2666 288 2746 2826 2906

FIGURE 8 (CONT'D)

3067	${\tt acaattataaaagagagaagtttgtatccatttatatattatatactacccatttatatattat$	3146
3147	$\verb"atgtctttataaggtttgatccatgatatttctaatattttagttgatatgtatatgaaagggtactatttgaactctct"$	3226
3227	tactctgtataaaggttggatcatccttaaagtgggtctatttaattttattgcttcttacagataaaaaaaa	3306
307	agttggtttgataaaatattgaaggatttaaaataataat	3386
387	ataatataacatttatctataaaaaagtaaatattgtcataaatctatacaatcgtttagccttgctggacgactctcaa	3466
3467	ttatttaaacgagagtaaacatatttgactttttggttatttaacaaattattatttaacactatatgaaatttttttt	3546
3547	tttatcggcaaggaaataaaattaaattaggagggacaatggtgtgtcccaatccttatacaaccaac	3626
627	gtcaggtcggggacaacaaaaaaaacaggcaagggaaattttttaatttgggttgtcttgtttgctgcataatttatgcag	3706
3707	taaaacactacacataacccttttagcagtagagcaatggttgaccgtgtgcttagcttcttttattttattttatc	3786
3787	agcaaagaataaataaaataaaatgagacacttcagggatgtttcaacccttatacaaaaccccaaaaaacaagtttccta	3866
867	gcaccctaccaactaaggtacc	3888
	KpnI	

PstI

1 :	<u>c.uc</u>	ayya	iatto	catty	jtaci	Lecca	igcat	.cacı	aca	gtya	aagı	ıııg	gete		geegg	grygr		Lacc	LCC	illia	80
81	aag	gggt	tttt	ccaco	ctaaa	aaatt	ctgg	rtato	atto	ctcad	ettta	actt	gttac	ttta	attt	ctca	taat	cttt	ggtt	gaaat	160
161	tat	caco	gctto	ccgca	acaco	gatat	ccct	acaa	attt	atta	tttg	gttaa	aacat	tttc	aaac	cgca	taaa	attt	tatga	aagtc	240
241	ccg	tcta	atct	taat	gtag	gtcta	acat	tttc	atat	tgaa	atat	ataa	attta	ctta	attt	tagc	gttg	gtag	aaago	cataa	320
321	tga	ttta	ttct	tatt	cttc	ettea	tata	aatg	ttta	atat	acaa	atata	aaca	aatt	cttt	acct	taaga	aagg	attt	ccat	400
401	ttt	atat	ttta	aaaa	atata	attta	tcaa	atat	tttt	caac	caco	gtaaa	atcto	ataa	taat	aagti	tgtt	tcaa	aagta	aataa	480
481	aat	ttaa	ctco	cataa	tttt	ttta	ttcg	actg	atct	taaa	gcaa	caco	cagt	gaca	caac	tagc	catt	tttt	tctt	tgaat	560
561	aaa	aaaa	tcca	aatta	tcat	tgta	tttt	tttt	atac	aatg	jaaaa	attto	cacca	aaca	atca	tttg	tggta	attt	ctgaa	agcaa	640
641	gto	atgt	tato	gcaaa	atto	ctata	atto	ccat	ttga	acact	acgo	gaagt	aact	gaag	atct	gctti	ttaca	atgc	gagad	cacat	720
721	ctt	ctaa	agta	aattt	taat	aata	igtta	ctat	atto	aaga	tttc	atat	atca	aata	ctca	atat	tact	tcta	aaaa	attaa	800
801	tta	gata	taat	taaa	atat	tact	tttt	taat	ttta	agtt	taat	tgtt	gaat	ttgt	gact	attg	attta	atta	ttcta	actat	880
881	gtt	taaa	ttgt	ttta	taga	atagt	ttaa	.agta	aata	taag	rtaat	gtag	gtaga	ıgtgt	taga	gtgt	tacc	ctaa	acca	taaac	960
961	tat	aaga	attta	atggt	ggac	taat	tttc	atat	attt	ctta	ttgo	tttt	acct	tttc	ttgg	tatg	taag	tccg	taacı	tggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	cact	ctgt	ggtc	tttt	ggtt	cato	cato	gatg	cttg	cgca	agaaa	aaaga	acaa	agaad	caaag	1120
1121	aaa	aaag	acaa	aaca	gaga	igaca	.aaac	gcaa	tcac	acaa	ccaa	ctca	aatt	agtc	actg	gctga	atca	agato	gcc	gcgtc	1200
1201	cat	gtat	gtct	aaat	gcca	tgca	.aagc	aaca	cgtg	ctta	acat	gcac	ttta	aatg	gctc	accca	atcto	caaco	ccaca	acaca	1280
1281	aac	acat	tgcc	tttt	tctt	cato	atca	ccac	aacc	acct	gtat	atat	tcat	tctc	ttcc	gcca	cctca	aatt	ctto	cactt	1360
1361	caa	caca	cgtc	aacc	tgca	tatg	cgtg	tcat	ccca	tgcc	caaa	tcto	catg	catg	ttcc	aacca	accti	tctc	ctta	atata	1440
1441	ata	ccta	taaa	tacc	tcta	atat	cact	cact	tett	tcat	cato	cato	cato	caga	gtac	tacta	actc	tacta	actai	taata	1520
1521 1	cccc	aaco	ccaa	ctcat	atto	aata	ctac	tcta		_		GT (CTC L	1587 11
1588																	GCT	AGG	GCT	GAA	1647
12 (V	G	S	G	P	A	A	Н	Т	A	A	I	Y	A	A	R	A	E	31
1648 32 1		AAA K		CTT L	CTC L	TTC F	GAA E	GGA G	TGG W	ATG M	GCT A	AAC N	GAC D	ATC I	GCT A	P	GGT G	GGT G	CAA Q	CTA L	1707 51
1708				_																	1767
52 5	1.	.1.	1	T	ע	V	Ŀ	IN	F.	Ъ	G	r	P	Ł	G	Τ.	L	G	V	E	71

FIGURE 9 (CONT'D)

1768 72		ACT T	GAC D	AAA K	TTC F	CGT R	AAA K	CAA Q	TCG S	GAG E	CGA R	TTC F	GGT G	ACT T	ACG T	ATA I	TTT F	ACA T	GAG E	ACG T	1827 91
1828	GTG	ACG	AAA	GTC	GAT	TTC	тст	TCG	AAA	CCG	ттт	AAG	СТА	TTC	ACA	GAT	TCA	AAA	GCC	АТТ	1887
92		т	ĸ	V	D	F	S	S	K	P	F	ĸ	L	F	T	D	s	K	Α	I	111
1888	CTC	GCT	GAC	GCT	GTG	АТТ	СТС	GCT	ACT	GGA	GCT	GTG	GCT	AAG	CGG	CTT	AGC	TTC	GTT	GGA	1947
112		A	D	A	V	I	L	Α	т	G	A	V	Α	K	R	L	S	F	v	G	131
1948	ጥርጥ	GGT	GAA	GGT	ጥርጥ	GGA	GGT	ጥጥሮ	тgg	AAC	CGT	GGA	ATC	TCC	GCT	TGT	GCT	GTT	TGC	GAC	2007
132		G	E	G	s	G	G	F	W	N	R	G	I	s	A	С	A	V	С	D	151
2008	CCA	CCT	CCT	ccc	מידימ	ም ምረጉ	CCT	AAC	a a a	CCT	CTT	GCG	GTG.	ልጥሮ	ССТ	GGA	GGC	GAT	ጥሮል	GC A	2067
152		A	A	P	I	F	R	N	K	P	L	A	v	I	G	G	G	D	s	A .	171
2068	200	C 2 2	C2.2	CCA	220	mmm	C/D/D	3.03	222	m a m	CCA	mcm	222	CTC	m a m	אמשא	λ/II/C	CAM	N.C.C	3.C3	2127
172		E	E	A	N N	F	L	Т	K	Y	G	s	K	V	Y	I	I	Н	R	R	191
2122	G > T	G G T		101	000	mam		s mm	3 ma	a. a	a.a	003	aam	mma	mam	3.30	O C/M	220	3 mm	CAT	2107
2128 192		GCT A	TTT F	AGA R	GCG A	TCT S	AAG K	ATT I	ATG M	Q	Q	R	GCT A	TTG L	S	N N	P	K	I	D	2187 211
																					0045
2188 212		ATT I	TGG W	AAC N	TCG	TCT	GTT V	GTG V	GAA E	GCT A	TAT Y	GGA G	GAT D	GGA G	GAA E	AGA R	GAT D	GTG V	CTT L	GGA G	2247 231
2248 232		TTG L	AAA K	GTG V	AAG K	AAT N	GTG V	GTT V	ACC T	GGA G	GAT D	GTT V	TCT S	GAT D	TTA L	AAA K	GTT V	TCT S	GGA G	TTG L	2307 251
232	•	_	-	·			•	•	-	•	_	·	-	_	_	•	•	_	-		
2308 252				ATT I			GAG E	CCA P		ACC T	AAG K	TTT F	TTG L	GAT D	GGT G	GGT G	GTT V	GAG E	TTA L	GAT D	2367 271
252	г	F	A	1	G	Н	E	P	A	T	K	г	L	ע	G	G	V	E	ם	ט	2/1
2368																					2427
272	S	D	G	Y	V	V	Т	K	P	G	Т	Т	Q	T	S	V	P	G	V	F	291
2428	GCT	GCG	GGT	GAT	GTT	CAG	GAT	AAG	AAG	TAT	AGG	CAA	GCC	ATC	ACT	GCT	GCA	GGA	ACT	GGG	2487
292	Α	Α	G	D	V	Q	D	K	K	Y	R	Q	Α	I	т	Α	Α	G	Т	G	311
2488	TGC	ATG	GCA	GCT	TTG	GAT	GCA	GAG	CAT	TAC	TTA	CAA	GAG	ATT	GGA	тст	CAG	CAA	GGT	AAG	2547
312	С	M	A	Α	L	D	A	E	Н	Y	L	Q	E	I	G	S	Q	Q	G	K	331
2548	AGT	GAT	TG <u>A</u>	agct	<u>:t</u> aat	aagt	atga	acta	aaat	gcat	gtag	gtgt	aaga	gete	atgg	agag	catg	gaat	attg	tatc	2624
332	s	D	* F	lindI	II															3	334
2625	cga	ccat	gtaa	cagt	ataa	taac	tgag	ctcc	atct	cact	tctt	ctate	gaata	aaaca	aaagg	gatgt	tato	jatat	atta	acac	2704
2705	tct	atct	atgo	acct	tatt	gttc	tatg	ataa	attt	cctc	ttati	tatta	ataa	atca	tctga	aatcg	gtgac	ggct	tato	gaat	2784
2785	gct	tcaa	aatag	taca	aaaa	caaa	tgtg	tact	ataa	gact	ttct	aaaca	aatto	ctaa	ettta	agcat	tgtç	gaacg	gagac	ataa	2864
2865	gto	ıttaa	gaag	acat	aaca	atta	taat	ggaa	gaag	tttg	tctc	catt	tata	tatta	atata	attac	ccac	ttat	gtat	tata	2944

FIGURE 9 (CONT'D)

945	ttaggatgttaaggagacataacaattataaagagagagtttgtatccatttatatattatataccatttatata	3024
025	ttatacttatccacttatttaatgtctttataaggtttgatccatgatatttctaatattttagttgatatgtatatgaa	3104
105	agggtactatttgaactctcttactctgtataaaggttggatcatccttaaagtgggtctatttaattttattgcttctt	3184
185	acagataaaaaaaaaattatgagtttgataaaatattgaaggatttaaaataat	3264
265	atatatgtatataaatttattataatataacatttatctataaaaaa	3344
345	gccttgctggacgactctcaattatttaaacgagagtaaacatatttgactttttggttatttaacaaattattatttaa	3424
425	${\tt cactatatgaaattttttttttttatcggcaaggaaataaaattaaattaggagggacaatggtgtgtcccaatccttat}$	3504
505	a caacca acttc cacagga agg t cagg t cgg gg acaacaa aaaaa acagg caaggga aatttt taattt gg gt t gt ct t ga acaacca act cacagga agg t cagg t cgg gg acaacaa acaacaa agg caaggga aatttt t taattt gg gt t gt ct t ga acaaccaact t cacagga agg t cagg t cgg gg acaacaa acaa	3584
585	$\verb tttgctgcata atttatgcagta aaacactacacata acccttttagcagtagagca attggttgaccgtgtgcttagctt $	3664
665	$\tt cttttattttatttttatcagcaaagaataaaataaaat$	3744
745	accccaaaaacaagtttcctagcaccctaccaactaaggtacc	3787
	KnnT	

Kpn1

	Ps	stI																			
1	ctac	agga	aatto	catto	gtact	CCC	gtat	catt	ata	gtga	aagt	tttg	gctct	ctc	gccgg	gtggt	tttt	ttacc	ctcta	ittta	80
81	. aaq	gggg	tttt	ccaco	ctaaa	aatt	ctgg	tato	atto	ctcad	cttt	actt	gttac	ttta	attt	ctca	taat	cttt	ggtto	gaaat	160
161	tat	cac	gctto	cgca	acacg	gatat	ccct	acaa	attt	atta	attt	gttaa	aacat	tttc	aaac	cgca	taaa	attti	tatga	aagtc	240
241	ccg	gtcta	atct	taat	gtag	ıtcta	acat	tttc	atat	tgaa	aata	tataa	attta	ctta	attt	tagc	gttg	gtaga	aaago	cataa	320
321	tga	attta	attct	tatt	cttc	ttca	tata	.aatg	ttta	atat	taca	atata	aaaca	aatt	cttt	acct	taag	aagga	attto	ccat	400
401	ttt	atai	ttta	aaaa	atata	ittta	itcaa	atat	tttt	caad	ccac	gtaaa	atctc	ataa	taat	aagt	tgtt	tcaaa	aagta	aataa	480
481	aat	ttaa	actco	cataa	atttt	ttta	ttcg	actg	atct	taaa	agca	acaco	ccagt	gaca	caac	tagc	catt	tttt	tctt	gaat	560
561	aaa	aaaa	atcca	aatta	atcat	tgta	tttt	tttt	atad	aatg	gaaa	attt	cacca	aaca	atca	tttg	tggt	attt	ctgaa	agcaa	640
641	gto	atg	tato	gcaaa	atto	tata	attc	ccat	ttga	acact	tacg	gaag	taact	gaag	atct	gctt	ttac	atgc	gagad	cacat	720
721	ctt	cta	aagta	aattt	taat	aata	gtta	.ctat	atto	caaga	attt	cata	tatca	aata	ctca	atat	tact	tcta	aaaa	attaa	800
801	tta	agata	ataat	taaa	atat	tact	ttt	taat	ttta	agti	ttaa	ttgti	tgaat	ttgt	gact	attg	attt	atta	ttcta	actat	880
881	gtt	taaa	attgt	ttta	ataga	tagt	ttaa	.agta	aata	ataag	gtaa	tgtag	gtaga	gtgt	taga	gtgt	tacc	ctaaa	accat	taaac	960
961	tat	aaga	attta	atggt	ggac	taat	tttc	atat	attt	ctta	attg	cttt	tacct	tttc	ttgg	tatg	taag	tccg	taact	tggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	cact	ctgt	ggtc	tttt	ggtt	cat	gcato	ggatg	cttg	cgca	agaa	aaag	acaa	agaad	caaag	1120
1121	aaa	aaag	jacaa	aaca	ıgaga	gaca	aaac	gcaa	tcac	acaa	accaa	actca	aaatt	agtc	actg	gctg	atca	agato	cgcci	gcgtc	1200
1201	cat	gtat	gtct	aaat	gcca	tgca	aagc	aaca	cgtg	ıctta	aacat	gcad	cttta	aatg	gctc	accc	atct	caac	ccaca	acaca	1280
1281	aac	acat	tgcc	tttt	tctt	cato	atca	ccac	aacc	acct	gtat	tatat	tcat	tctc	ttcc	gcca	cctc	aatti	tctto	cactt	1360
1361	caa	caca	acgto	aacc	tgca	tatg	cgtg	tcat	ccca	tgc	ccaaa	atcto	ccatg	catg	ttcc	aacc	acct	tctc	tctta	atata	1440
1441	ata	ccta	ataaa	tacc	tcta	atat	cact	cact	tctt	tcat	cato	ccato	ccatc	caga	gtac	tact	actc	tacta	actat	taata	1520
1521	ccc	caac	ccaa	ctcat	atto	aata	ctac	tcta	ct A	ATG (GCG	GAT .	ACA (CT A	AGA (GGA A	ACC (CAT (CAC (GAT	1587
1										M	Α	D	T	A	R	G	Т	H 1	H 1	D	11
1588 12					GAC D								GAC D						ATG M	TCC S	1647 31
1648	GGA	CGA	GGA	тст	GAC													GCT	GTC	ACA	1707
32			G		D			K	s					К	A	A	т	A	v	Т	51
1708	GCT	GGT	GGT	TCC	CTC	CTT	GTT	CTC	TCC	AGC	CTI	' ACC	CTT	GTT	GGA	ACT	GTC	АТА	GCT	TTG	1767

FIGURE 10 (CONT'D)

1768 ACT GTT GCA ACA CCT CTG CTC GTT ATC TTC AGC CCA ATC CTT GTC CCG GCT CTC 72 T V A T P L L V I F S P I L V P A L	ATC ACA 182 I T 91												
72 T V A T P L L V I F S P I L V P A L	I Т 91												
1828 GTT GCA CTC CTC ATC ACC GGT TTT CTT TCC TCT GGA GGG TTT GGC ATT GCC GCT													
92 V A L L I T G F L S S G F G I A A	I T 111	1											
1888 GTT TTC TCT TGG ATT TAC AA gtaagcacacatttatcatcttacttcataattttgtgcaatatg	gtgcatgca 196 118												
1961 tgtgttgagccagtagctttggatcaattttttttggtcgaataacaaatgtaacaataagaaattgcaaatt	tctagggaa 204	40											
961 tgtgttgagccagtagctttggatcaatttttttggtcgaataacaaatgtaacaataagaaattgcaaattctagggaa 041 catttggttaactaaatacgaaatttgacctagctagcttgaatgtgtctgtgtatatcatctatataggtaaaatgctt													
119 YATGEHPQGSD	AC AAG 218 K 130												
2185 TTG GAC AGT GCA AGG ATG AAG TTG GGA AGC AAA GCT CAG GAT CTG AAA GAC AGA	GCT CAG 224	44											
131 L D S A R M K L G S K A Q D L K D R	A Q 150	0											
151 Y Y G Q Q H T G G E H D R D R T R G	G Q 170	0											
2305 CAC ACT ACC ATG AAT GGT CTC GAA ACT CAC AAC ACA AGG CTC TGT ATC GTA GGA 171 H T T M N G L E T H N T R L C I V G													
171 H T T M N G L E T H N T R L C I V G	S G 190	U											
2365 CCA GCG GCA CAC ACG GCG GCG ATT TAC GCA GCT AGG GCT GAA CTT AAA CCT CTT 191 P A A H T A A I Y A A R A E L K P L	CTC TTC 242												
2425 GAA GGA TGG ATG GCT AAC GAC ATC GCT CCC GGT GGT CAA CTA ACA ACC ACC 211 E G W M A N D I A P G G Q L T T T T	GAC GTC 248 D V 230												
2485 GAG AAT TTC CCC GGA TTT CCA GAA GGT ATT CTC GGA GTA GAG CTC ACT GAC AAA 231 E N F P G F P E G I L G V E L T D K	TTC CGT 254												
2545 AAA CAA TCG GAG CGA TTC GGT ACT ACG ATA TTT ACA GAG ACG GTG ACG AAA GTC	GAT TTC 260	04											
251 K Q S E R F G T T I F T E T V T K V	D F 270												
2605 TCT TCG AAA CCG TTT AAG CTA TTC ACA GAT TCA AAA GCC ATT CTC GCT GAC GCT	GTG ATT 266	64											
271 S S K P F K L F T D S K A I L A D A	V I 290	0											
2665 CTC GCT ACT GGA GCT GTG GCT AAG CGG CTT AGC TTC GTT GGA TCT GGT GAA GGT	TCT GGA 272	24											
291 L A T G A V A K R L S F V G S G E G	S G 310	0											
2725 GGT TTC TGG AAC CGT GGA ATC TCC GCT TGT GCT GTT TGC GAC GGA GCT GCT CCG													
311 G F W N R G I S A C A V C D G A A P	I F 330	0											
2785 CGT AAC AAA CCT CTT GCG GTG ATC GGT GGA GGC GAT TCA GCA ATG GAA GAA GCA 331 R N K P L A V I G G G D S A M E E A													

FIGURE 10 (CONT'D)

									TAT									AGA		TCT	2904
351	L	т	K	Y	G	S	K	V	Y	I	I	Н	R	R	D	Α	F	R	A	s	370
2905	AAG	ATT	ATG	CAG	CAG	CGA	GCT	TTG	TCT	AAT	CCT	AAG	ATT	GAT	GTG	ATT	TGG	AAC	TCG	TCT	2964
371	K	I	M	Q	Q	R	Α	L	S	N	P	K	I	D	V	Ι	W	N	s	s	390
2965	GTT	GTG	GAA	GCT	TAT	GGA	GAT	GGA	GAA	AGA	GAT	GTG	СТТ	GGA	GGA	TTG	AAA	GTG	AAG	AAT	3024
391	V	V	E	Α	Y	G	D	G	E	R	D	V	L	G	G	L	K	V	K	N	410
3025	GTG	GTT	ACC	GGA	GAT	GTT	TCT	GAT	тта	AAA	GTT	тст	GGA	TTG	TTC	TTT	GCT	ATT	GGT	CAT	3084
411	V	V	Т	G	D	V	S	D	L	K	V	S	G	L	F	F	A	I	G	Н	430
3085	GAG	CCA	GCT	ACC	AAG	ттт	TTG	GAT	GGT	GGT	GTT	GAG	тта	GAT	TCG	GAT	GGT	TAT	GTT	GTC	3144
431	E	P	Α	Т	K	F	L	D	G	G	V	E	L	D	s	D	G	Y	V	V	450
3145	ACG	AAG	ССТ	GGT	ACT	ACA	CAG	ACT	AGC	GTT	CCC	GGA	GTT	TTC	GCT	GCG	GGT	GAT	GTT	CAG	3204
451	Т	K	P	G	Т	Т	Q	Т	S	v	P	G	V	F	A	Α	G	D	v	Q	470
3205	GAT	AAG	AAG	TAT	AGG	CAA	GCC	ATC	ACT	GCT	GCA	GGA	АСТ	GGG	TGC	ATG	GCA	GCT	TTG	GAT	3264
471	D	K	K	Y	R	Q	A	I	Т	A	A	G	Т	G	С	M	A	A	L	D	490
3265	GCA	GAG	САТ	TAC	тта	CAA	GAG	ATT	GGA	тст	CAG	CAA	GGT	AAG	AGT	GAT	TGA	agct	<u>t</u> aat	aagt	3327
491		E	н	Y	L	Q	E	I	G	s	Q	Q	G	ĸ	s	D	*]	Hind	III	_ (507
2220) 2+6			+~~	+~+	aata	+	200+	asta	~~~	aga t	~~==		~+ a + /		rcato	*+ = = 0	and s		aact	3407
2220		aac t												gcaci	.cga						
				3	- 3	55-5	uuug	uguu	5	JJ	y	,,,	•	_	_		cuu	agce	icaai	aact	3407
3408				_			_													gttct	
	gag	getec	atct	cact	tett	ctat	gaat	aaac	aaag	gatg	ttat	gata	tatta	aacad	ctcta	atcta	atgca	acctt	atto		3487
3488	gaç Batç	getec	atct	cact	tctt	ctat	gaat ataa	aaac atca	aaag	gatg	ttate	gata	tatta ttat(aacad ggaat	eteta	atcta	atgca atagt	acctt	atto	gttct	3487 3567
3488	gaç Batç	getec	atct	cact	tctt	ctat	gaat ataa	aaac atca	aaag	gatg	ttate	gata	tatta ttat(aacad ggaat	eteta	atcta	atgca atagt	acctt	atto	gttct	3487 3567
3488 3568	gaç atç gtç	getec gataa gtact	atct aattt	cact	tctt ttat	ctat	gaat ataa aatt	aaac atca ctaa	aaag tetg	gatg aatc agca	ttatç gtga ttgtç	gata egge	tatta ttato gaga	aacad ggaal catad	eteta :gett agtgt	atcta ccaaa ctaag	atgca atagt gaaga	acctt tacaa	atto aaaac aacaa	gttct	3487 3567 3647
3488 3568 3648	gaç atç gtç aat	getec gataa gtaet	atct aattt aataa agaag	cact	tett ttat	ctat tatt aaac	gaat ataa aatt tata	aaac atca ctaa tatt	aaagg tetga ettta atata	gatg aatc agca atta	ttat; gtga ttgt;	gata egge gaac etta	tatta ttatç gagad tgta	aacad ggaat catad ttata	ctcta cgctt agtgt	atcta ccaaa ctaag	atgca atagt gaaga gttaa	acctt tacaa acata aggag	aattg aaaac aacaa	gttct caaat attat	3487 3567 3647 3727
3488 3568 3648 3728	gaç atç gtç aat	getec gataa gtaet eggaa	atct attt ataa agaag	cact cctc gact gtttg	tctt ttat ttct	ctat tatt aaac catt	gaat ataa aatt tata ccat	aaac atca ctaa tatt	aaagg tetg ettt atat atat	gatg aatc agca atta	gtgad ttgtg	gata egge: gaac etta	tatta ttato gagao tgta	aacad ggaat catad ttata	eteta egett agtgt attag	atcta ccaaa ctaag ggatg	atgca atagt gaaga gttaa	acctt tacaa acata aggag	aaaac aacaa gacat	gttct caaat attat caaca	3487 3567 3647 3727 3807
3488 3568 3648 3728	gaç atç gtç aat	getec gataa gtaet eggaa	atct attt ataa agaag	cact cctc gact gtttg	tctt ttat ttct	ctat tatt aaac catt	gaat ataa aatt tata ccat	aaac atca ctaa tatt	aaagg tetg ettt atat atat	gatg aatc agca atta	gtgad ttgtg	gata egge: gaac etta	tatta ttato gagao tgta	aacad ggaat catad ttata	eteta egett agtgt attag	atcta ccaaa ctaag ggatg	atgca atagt gaaga gttaa	acctt tacaa acata aggag	aaaac aacaa gacat	gttct caaat attat	3487 3567 3647 3727 3807
3488 3568 3648 3728 3808	gaç atç atç att att	getec gatas gtact ggas catas	atct atta ataa agaag aagag	cact cctc gact gtttg	tctt ttat ttct ftctc	ctat tatt aaac catt gtat atga	gaat ataa aatt tata ccat	aaac atca ctaa tatt ttat	aaagg totg ottt atat atat	gatg aatcg agca attac tata	ttat; gtgac ttgt; cccac tacta	gata egget gaac etta accca atat	tatta ttatq gagad tgtat attta	ggaat cataa ttata atata	ctcta cgctt agtgt attag attat	atcta tcaaa ttaag ggatg tactt	atgca atagt gaaga gttaa catco	acctt tacaa acata aggag cactt	aaaac aacaa gacat cattt	gttct caaat attat caaca	3487 3567 3647 3727 3807 3887
3488 3568 3648 3728 3808	gag atg atg att att tot	getec gataa gtact eggaa eataa	atct attt ataa agaag aagag aagag	cact cctc gact gtttg gagaa gtttg	tctt ttct tctc gttt gatco	ctat tatt aaac catt gtat atga	gaat ataa aatt tata ccat tatt	aaac atca ctaa tatt ttat tcta	aaagg tetg ettta atat atat atat	gatg aatce agca attae tatae tttae	ttate gtgae ttgte cccae tacte gttge	gata egge gaac etta acce atat	tatta ttate gagae tgtat attta gtate ttgct	aacad ggaal catad ctata atata atgad	eteta egett agtgt attat attat	atcta tcaaa ttaag ggatg tactt gtact	atgca atagt gaaga gttaa catco catco	acctt tacaa acata aggag cactt tgaac	aaaacaa aacaa gacat cattt	gttct caaat attat caaca caatg	3487 3567 3647 3727 3807 3887
3488 3568 3648 3728 3808 3888 3968	gagg gagg atcompany gagger gang gagger gang gagger	getec gataa ggaa cataa cttat	aattt aattt aataa aggaag aagag aagag caaag	cector gact true gacta g	tettat ttat ttete gttt atce	ctat tatt aaaac catt gtat atga atcc agga	gaat ataa aatt tata ccat tatt ttaa	aaaac ctaaa tatt ttat tcta agtg	aaaagg ctttc atat atat atat ggtc aataa	gatg aatce agca atta tata tttae tatt	ttat; gtgac ttgt; cccac tacta gttg; taat	gata cggc gaacg ctta accca atatg	tatta ttatq gagad tgta attta gtata ttgc	aacac ggaal cataa ttata atata atgaa ttctt	eteta egett agtgt attas attas eacag	atcta ccaaa ttaag ggatg cactt ytact ytact	atagtaaga gaaga gatcc cattt	acctt tacaa acata aggag cactt tgaac	aaaaacaa aacaa gacat tetete	gttct caaat attat caaca caatg cttac cgagt	3487 3567 3647 3727 3807 3887 3967 4047
3488 3568 3648 3728 3808 3888 3968	gagg gagg atcompany gagger gang gagger gang gagger	getec gataa ggaa cataa cttat	aattt aattt aataa aggaag aagag aagag caaag	cector gact true gacta g	tettat ttat ttete gttt atce	ctat tatt aaaac catt gtat atga atcc agga	gaat ataa aatt tata ccat tatt ttaa	aaaac ctaaa tatt ttat tcta agtg	aaaagg ctttc atat atat atat ggtc aataa	gatg aatce agca atta tata tttae tatt	ttat; gtgac ttgt; cccac tacta gttg; taat	gata cggc gaacg ctta accca atatg	tatta ttatq gagad tgta attta gtata ttgc	aacac ggaal cataa ttata atata atgaa ttctt	eteta egett agtgt attas attas eacag	atcta ccaaa ttaag ggatg cactt ytact ytact	atagtaaga gaaga gatcc cattt	acctt tacaa acata aggag cactt tgaac	aaaaacaa aacaa gacat tetete	gttct caaat attat caaca caatg cttac	3487 3567 3647 3727 3807 3887 3967 4047
3488 3568 3648 3728 3808 3888 3968	gaggaggaggaggaggaggaggaggaggaggaggaggag	getec gataa ggaa ataa attat ttat gtat	aattt aattt aagag aagag aagag aaagg aaagg	cector gact tttg gattg	ttat ttat ttctc ttctc gttt atcc gttt tttat	ctat tatt aaaac catt gtat atga atcc agga aaaaa	gaat ataa aatt tata ccat tatt ttaa tttaa gtaa	aaaccatcaactattttatttattttattttattataagtg	aaaagg tctg; cttt: atat: atat: atat: ggtc: aata:	gatg aatca agca attaa tata tatt ataaa	ytgac cccac cacta taati taati	gata cggc gaacc ctta accc atati ttta taaa	tatta ttati tgta attta ttgc ttacca aatci	aacac ggaal cataa ttata atata ttct!	cgett cgett agtgt attal attal cacag	ttaag ggatg zacti ytact gataa	atagtaaga yttaa zatco zattt aaaaa	acctt tacaa acata aggag cactt tgaac aaaaa	catto aaaaac aacaa gacat ctcto ctcto	gttct caaat attat caaca caatg cttac cgagt	3487 3567 3647 3727 3807 3887 3967 4047 4127
3488 3568 3648 3728 3808 3888 3968 4048 4128	gagger at a graph of the graph	getec gataa ggaa ataa attat gtat gtat	aattt aattt aagagaag aagag aaagg aaaagg aaaagg aaaagg aaaagg aaaagg	agaaa agattttg gtttg aata aata	ttett ttat tttett gttt ggttt gatee ttga ataa	ctat tatt aaaac catt gtat atga atcc agga aaaaa aattt	gaat ataa aatt tata ccat ttatt ttaa tttaa gtaa g	aaaac ctaa ctaa tatt tcta agtg aaat ttttt	aaaaggettetaaaaaaaaaaaaaaaaaaaaaaaaaaaa	gatg aatca agca attaa ttata ttata ataaa attaa	ttat; gtgac ttgt; cccac tacta ttat;	gata cggc gaacc ctta accc atat ttta taaaa	tatta ttatq gagad tgta attta ttgc taaca aatcq	aacacacacacacacacacacacacacacacacacaca	cgcti cgcti agtgi httai attai cacag aatai agcci	atcta ccaaa ttaag ggatg cacti ytact catgi	ataga gaaga yttaa cattt catat	acctt tacas acats aggag cactt tgaac aaaas taaat	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	gttct caaat attat caaca caatg cttac cgagt ctata	3487 3567 3647 3727 3807 3887 3967 4047 4127

FIGURE 10 (CONT'D)

4288	aggtcggggacaacaaaaaaacaggcaagggaaattttttaatttgggttgtcttgtttgctgcataatttatgcagtaa	4367
4368	aacactacacataacccttttagcagtagagcaatggttgaccgtgtgcttagcttcttttattttatttttatcagc	4447
4448	aaagaataaataaaataaaatgagacacttcagggatgtttcaacccttatacaaaaccccaaaaacaagtttcctagca	4527
4528	ccctaccaactaa <u>ggtacc</u>	4546
	KpnI	

PstI

1	ctgo	agga	aatto	catto	tact	ccca	agtat	catt	atag	gtga	aagti	ttg	gctct	ctcg	ccgg	tggt	tttt	tacc	tcta	ttta	80
81	l aag	gggg	tttt	ccaco	ctaaa	aaatt	ctgg	tatc	atto	tcac	ettta	cttg	ttac	ttta	attt	ctcat	taato	ctttg	gttg	gaaat	160
161	. tat	caco	gctto	ccgca	cacg	atat	ccct	acaa	attt	atta	itttg	ttaa	acat.	tttca	aaac	cgcat	taaaa	attt	atga	agtc	240
241	. ccg	gtcta	atctt	taat	gtag	jtcta	acat	tttc	atat	tgaa	atat	ataa	ttta	ctta	attti	tagc	gttgg	gtaga	aaago	ataa	320
321	. tga	attta	attct	tatt	cttc	ttca	tata	aatg	ttta	atat	acaa	tata	aaca	aatto	cttta	acct	taaga	aagga	attto	ccat	400
401	ttt	atat	ttta	aaaa	ıtata	ttta	itcaa	atat	tttt	caac	cacg	taaa	tctc	ataa	taata	aagtt	tgtt	caaa	agta	ataa	480
481	. aat	ttaa	actco	cataa	tttt	ttta	ittcg	actg	atct	taaa	gcaa	cacc	cagt	gaca	caact	tagco	catt	tttt	cttt	gaat	560
561	. aaa	aaaa	atcca	aatta	tcat	tgta	tttt	tttt	atac	aatg	jaaaa	tttc	acca	aaca	atcai	tttgt	tggta	attto	tgaa	agcaa	640
641	. gtc	catgt	tato	gcaaa	atto	tata	attc	ccat	ttga	cact	acgg	aagt	aact	gaaga	atct	gctt	ttaca	atgcg	gagac	cacat	720
721	. ctt	ctaa	aagta	aattt	taat	aata	igtta	ctat	attc	aaga	tttc	atat	atca	aata	ctca	atatt	tacti	ctaa	aaaa	attaa	800
801	. tta	agata	ataat	ctaaa	atat	tact	tttt	taat	ttta	.agtt	taat	tgtt	gaat	ttgt	gacta	attga	attta	attat	tcta	actat	880
881	. gtt	taaa	attgt	ttta	taga	tagt	ttaa	agta	aata	taag	rtaat	gtag	taga	gtgti	tagag	gtgti	tacco	ctaaa	accat	aaac	960
961	. tat	aaga	attta	atggt	ggac	taat	tttc	atat	attt	ctta	ttgc	tttt	acct	tttc	ttgg	tatg	taagi	ccgt	aact	ggaa	1040
1041	tta	ctgt	gggt	tgcc	atgg	cact	ctgt	ggtc	tttt	ggtt	catg	catg	gatg	cttg	cgcaa	agaaa	aaaga	acaaa	agaac	caaag	1120
1121	aaa	aaag	jacaa	aaca	ıgaga	gaca	aaac	gcaa	tcac	acaa	ccaa	ctca	aatt	agtc	actg	gctga	atcaa	agato	gccg	gegte	1200
1201	cat	gtat	gtct	aaat	gcca	tgca	aagc	aaca	cgtg	ctta	acat	gcac	ttta	aatg	gctca	accca	atcto	caaco	caca	acaca	1280
1281	aac	acat	tgcc	tttt	tctt	cato	atca	ccac	aacc	acct	gtat	atat	tcat	tata	ttcc	gccad	cctca	aattt	ctto	cactt	1360
1361	caa	caca	cgto	caacc	tgca	tatg	cgtg	tcat	ccca	tgcc	caaa	tctc	catg	catg	ttcca	aacca	accti	cctct	ctta	atata	1440
1441	ata	ccta	taaa	atacc	tcta	atat	cact	cact	tctt	tcat	cato	catc	catc	caga	gtac	tacta	actci	acta	actat	aata	1520
1521 1	ccc	caac	ccaa	ctcat	atto	aata	ctac	tcta						AA A						CTC L	1587 11
1588 12			GTA V											ATT I				AGG R	GCT A	GAA E	1647 31
1648	CTT	AAA	ССТ	СТТ	СТС	TTC	GAA	GGA	TGG	ATG	GCT	AAC	GAC	ATC	GCT	ccc	GGT	GGT	CAA	CTA	1707
32	L	K	P	L	L	F	E	G	W	М	A	N	D	I	Α	P	G	G	Q	L	51
																				GAG E	

FIGURE 11 (CONT'D)

1768 CTC ACT GAC AAA TTC CGT AAA CAA TCG GAG CGA TTC GGT ACT ACG ATA TTT ACA GAG ACG 1827 91 D K F R K Q S E R F G T т Ι 1828 GTG ACG AAA GTC GAT TTC TCT TCG AAA CCG TTT AAG CTA TTC ACA GAT TCA AAA GCC ATT P K F т D 111 K V D F S S K F Τ. 1888 CTC GCT GAC GCT GTG ATT CTC GCT ACT GGA GCT GTG GCT AAG CGG CTT AGC TTC GTT GGA 1947 K R Α т G 1948 TCT GGT GAA GGT TCT GGA GGT TTC TGG AAC CGT GGA ATC TCC GCT TGT GCT GTT TGC GAC 2007 S G F W N R G Ι S Α G G 2008 GGA GCT GCT CCG ATA TTC CGT AAC AAA CCT CTT GCG GTG ATC GGT GGA GGC GAT TCA GCA 2067 I F R N K P L Α v 2127 2068 ATG GAA GAA GCA AAC TTT CTT ACA AAA TAT GGA TCT AAA GTG TAT ATA ATC CAT AGG AGA K V 191 K Y G S 2128 GAT GCT TTT AGA GCG TCT AAG ATT ATG CAG CGA GCT TTG TCT AAT CCT AAG ATT GAT 2187 F R A S K I M Q Q R Α L S N P 211 2188 GTG ATT TGG AAC TCG TCT GTG GAA GCT TAT GGA GAT GGA GAA AGA GAT GTG CTT GGA 231 S V E A Y G D G E 2307 2248 GGA TTG AAA GTG AAG AAT GTG GTT ACC GGA GAT GTT TCT GAT TTA AAA GTT TCT GGA TTG 251 232 G K V K N v V \mathbf{T} G D V s D L K 2308 TTC TTT GCT ATT GGT CAT GAG CCA GCT ACC AAG TTT TTG GAT GGT GGT GTT GAG TTA GAT 2367 G H E P A т K F L D A I 2368 TCG GAT GGT TAT GTT GTC ACG AAG CCT GGT ACT ACA CAG ACT AGC GTT CCC GGA GTT TTC 2427 K Р G т T Q 2428 GCT GCG GGT GAT GTT CAG GAT AAG AAG TAT AGG CAA GCC ATC ACT GCT GCA GGA ACT GGG 2487 G D V Q D K K Y R Q A I \mathbf{T} 311 Α 2488 TGC ATG GCA GCT TTG GAT GCA GAG CAT TAC TTA CAA GAG ATT GGA TCT CAG CAA GGT AAG 2547 E Н Y Q E I 2548 AGT GAT ATG GCG GAT ACA GCT AGA GGA ACC CAT CAC GAT ATC ATC GGC AGA GAC CAG TAC 2607 351 D T A R G T H H D I I G 2667 2608 CCG ATG ATG GGC CGA GAC CGA GAC CAG TAC CAG ATG TCC GGA CGA GGA TCT GAC TAC TCC 371 M G R D R D Q Y Q M S G R G S 2668 AAG TCT AGG CAG ATT GCT AAA GCT GCA ACT GCT GTC ACA GCT GGT GGT TCC CTC CTT GTT 2727 K Α т V \mathbf{T} Α G G s 391 Α Α Α

FIGURE 11 (CONT'D)

2728	CTC	TCC	AGC	CTT	ACC	CTT	GTT	GGA	ACT	GTC	ATA	GCT	TTG	ACT	GTT	GCA	ACA	CCT	CTG	CTC	2787
392	L	S	S	L	T	L	V	G	Т	V	I	A	L	т	V	A	Т	P	L	L	411
2788	_					ATC											CTC				2847
412	V	I	F	S	P	I	L	V	P	Α	L	I	Т	V	Α	L	L	Ι	т	G	431
2848 432		CTT L	TCC S	TCT S	GGA G	GGG G	TTT F	GGC G	ATT I	GCC A	GCT A	ATA I	ACC T	GTT V	TTC F	TCT S	TGG W	ATT I	TAC Y	AA g K	2907 451
432	•	_	5	5	J	•	•	J	_	**		-	•	•	•	J	••	-	•		
2908	taag	gcaca	acati	ttato	catc	tact	tcat	aatt	ttgt	gcaa	itato	tgca	tgca	tgtg	rttga	igcca	igtag	rcttt	ggat	caat	2987
2988	tttt	ttgg	gtcga	aataa	acaaa	atgta	aacaa	ataag	gaaat	ttgca	aaat	tctag	ggga	acati	tggt	ttaad	ctaaa	ataco	gaaat	tttga	3067
3068	ccta	agcta	agcti	tgaa	tgtgi	tctgt	gtat	tatca	atcta	atata	aggta	aaaa	tgcti	tggta	atgat	tacci	tatt <u>«</u>	gatt	gtgaa	atag	3146
3147	G TA	AC GO	CA AC	CG G	GA G	AG C	AC CO	CA CA	AG GO	GA TO	CA G	AC AA	AG T	rg ga	AC AC	GT GC	CA AC	G A	G A	\G	3204
452	Y	Α	Т	G	E	Н	P	Q	G	s	D	K	L	D	s	A	R	М	K		470
3205	-						-	-									CAG				3264
471	L	G	s	K	A	Q	D	L	K	D	R	A	Q	Y	Y	G	Q	Q	Н	T	490
																			_	agta	3327
491	G	G	E	Н	D	R	D	R	T	R	G	G.	Q	Н	Т	Т	*	Hine	IIIE		507
3328	tga	acta	aaat	gcat	gtag	gtgt	aaga	gctc	atgg	agag	catg	gaat	attg	tatc	cgaco	catg	taaca	agtat	aata	actg	3407
3408	ago	tcca	tctc	actt	cttc	tatg	aata	aaca	aagg	atgt	tatg	atat	atta	acac	tctai	tctai	tgcad	cctta	attgt	tcta	3487
3488	tga	taaa	tttc	ctct	tatt	atta	taaa	tcat	ctga	atcg	tgac	ggct	tatg	gaat	gette	caaa	tagta	acaaa	aaca	aaatg	3567
3568	tgt	acta	taag	gactt	tcta	aaca	attc	taac	ttta	gcat	tgtg	aacg	agac	ataa	gtgti	taaga	aagad	cataa	caat	tata	3647
3648	atg	gaag	gaagt	ttgt	ctcc	attt	atat	atta	tata	ttac	ccac	ttat	gtat	tata	ttag	gatg	ttaag	ggaga	acata	acaa	3727
3728	tta	taaa	ıgaga	agaag	ıtttg	tatc	catt	tata	tatt	atat	acta	ccca	ttta	tata	ttata	actta	atcca	actta	attta	aatgt	3807
3808	ctt	tata	aggt	ttga	tcca	tgat	attt	ctaa	tatt	ttag	ttga	tatg	tata	tgaa	agggt	tacta	attt	gaact	ctct	tact	3887
3888	ctg	tata	ıaagç	gttgg	gatca	tcct	taaa	gtgg	gtct	attt	aatt	ttat	tgct	tctta	acaga	ataa	aaaa	aaaat	tato	gagtt	3967
3968	ggt	ttga	ıtaaa	atat	tgaa	ggat	ttaa	aata	ataa	taaa	taat	aaat	aaca	tata	atata	atgta	atata	aaatt	tatt	ataa	4047
4048	tat	aaca	ttta	tcta	taaa	aaag	taaa	tatt	gtca	taaa	tcta	taca	atcg	ttta	geeti	tgct	ggac	gacto	ctcaa	attat	4127
4128	tta	aacg	ragag	gtaaa	cata	tttg	actt	tttg	gtta	ttta	acaa	atta	ttat	ttaa	cacta	atato	gaaat	tttt	tttt	ttta	4207
4208	tcg	gcaa	ıggaa	ataa	aatt	aaat	tagg	aggg	acaa	tggt	gtgt	ccca	atcc	ttata	acaa	ccaa	cttco	cacaç	gaag	ggtca	4287

FIGURE 11 (CONT'D)

4288	ggtcggggacaacaaaaaaacaggcaagggaaattttttaatttgggttgtcttgtttgctgcataatttatgcagtaaa	4367
4368	acactacacataacccttttagcagtagagcaatggttgaccgtgtgcttagcttcttttattttatttttttatcagca	4447
4448	aagaataaataaaataaaatgagacacttcagggatgtttcaacccttatacaaaaccccaaaaacaagtttcctagcac	4527
4528	cctaccaactaaggtacc	4545
	VnnT	

